

CLAIMS

1. A process for producing a component-embedded substrate, comprising the steps of:

connecting and fixing a first electronic component to a first electrode pattern on a first supporting layer with a conductive bonding material;

press-bonding a second supporting layer including a second electrode pattern onto the electronic component-fixed surface of the first supporting layer with a first prepreg therebetween to perform transfer;

separating the first supporting layer and the second supporting layer from the first prepreg;

curing the first prepreg before or after the separating step; connecting and fixing a second electronic component onto the back surface of the second electrode pattern with a conductive bonding material;

press-bonding a third supporting layer including a third electrode pattern onto a second electronic component-fixed surface with a second prepreg therebetween to perform transfer;

separating the third supporting layer from the second prepreg; and

curing the second prepreg before or after the separating step, wherein the prepgs and the electrode patterns are sequentially laminated through the steps.

2. A process for producing a component-embedded substrate, comprising the steps of:

connecting and fixing a first electronic component on the

surface of an electrode pattern on a supporting layer with a conductive bonding material;

press-bonding a first prepreg onto the first electronic component-fixed surface of the supporting layer;

separating the supporting layer from the first prepreg;

curing the first prepreg before or after the separating step;

connecting and fixing a second electronic component onto the back surface of the electrode pattern with a conductive bonding material;

press-bonding a second prepreg onto the second electronic component-fixed surface; and

curing the second prepreg.

3. A process for producing a component-embedded substrate, comprising the steps of:

connecting and fixing a first electronic component onto the surface of a first electrode pattern on a first supporting layer with a conductive bonding material;

press-bonding a second supporting layer including a second electrode pattern onto the electronic component-fixed surface of the first supporting layer with a first prepreg therebetween to perform transfer;

separating the first supporting layer and the second supporting layer from the first prepreg;

curing the first prepreg before or after the separating step;

connecting and fixing a second electronic component onto the back surface of the first electrode pattern with a conductive bonding material;

press-bonding a third supporting layer including a third

electrode pattern onto a second electronic component-fixed surface with a second prepreg therebetween to perform transfer;

separating the third supporting layer from the second prepreg; and

curing the second prepreg before or after the separating step, wherein the prepgs and the electrode patterns are sequentially laminated through the steps.

4. The process for producing the component-embedded substrate according to any one of claims 1 to 3, further comprising the steps of:

forming a through hole in this resin layer across the thickness direction after curing the prepreg; and

forming a conducting path inside the hole, the conducting path electrically connecting the electrode patterns provided on the front surface and the back surface of the resin layer.

5. The process for producing the component-embedded substrate according to any one of claims 1 to 3, further comprising the steps of:

forming the hole connecting the electrode pattern provided on the front surface or the back surface of the resin layer with the external electrode of the electronic component after curing the prepreg; and

forming the conducting path inside the hole, the conducting path electrically connecting the electrode pattern with the external electrode of the electronic component.

6. The process for producing the component-embedded substrate

according to any one of claims 1 to 5, wherein the step of curing the prepreg further comprises the substeps of:

    performing temporary curing before separating the supporting layer from the prepreg; and

    performing complete curing after separating the supporting layer from the prepreg.

7. The process for producing the component-embedded substrate according to any one of claims 1 to 6, further comprising the steps of:

    press-bonding a fourth supporting layer having a fourth electrode pattern onto the surface of the first prepreg with a third prepreg therebetween to perform transfer, the surface being opposite the surface bonded to the second prepreg;

    separating the fourth supporting layer from the third prepreg; and

    curing the prepreg before or after the separating step.